

Amendment under 37 C.F.R. §1.116
Attorney Docket No. 053168
Application No. 10/550,627

REMARKS

Claims 1, 3, 5 and 7 are pending in the present application. Claim 1 is herein amended.

Claims 2, 4, 6 and 8 are canceled. No new matter has been presented.

Amendments to claim 1 are supported in the specification at, *e.g.*, pages 4 and 6-7, and in original claim 2.

Claim Rejections - 35 U.S.C. § 102

Claims 1-8 were rejected under 35 U.S.C. § 102 as being anticipated by **Guillard** (US 6,319,303). Favorable reconsideration is requested.

Applicants respectfully submit that Guillard does not teach or suggest

an oxygen concentrating means provided with an adsorbent for adsorbing nitrogen gas that is contained in the air compressed by the air compression means,

wherein the oxygen concentrating means is an adsorption tower having an upstream side and a downstream side, the upstream side of the tower being filled with a silica gel as an adsorbent for adsorbing impurities including moisture and hydrocarbon contained in the compressed air, the downstream side of the tower being filled with a molecular sieve as an adsorbent for adsorbing nitrogen gas contained in the compressed air at a downstream side

as recited in amended claim 1.

The Office Action cited adsorber 5B of Guillard as corresponding to an oxygen concentrating means as recited in claim 1. (Office Action, page 2.)

However, main adsorbers (5A, 5B) in Guillard are for eliminating a first impurity of moisture (H₂O) and a second impurity of moisture (CO₂). (Col. 2, line 64 to col. 3, line 9.) On the contrary, concentration (partial pressure) of oxygen in compressed air is increased by

Amendment under 37 C.F.R. §1.116

Attorney Docket No. 053168

Application No. 10/550,627

adsorbing nitrogen gas of the compressed air in the first adsorption towers 2, 3 in the present invention. Furthermore, Guillard describes that purification of air is increased by eliminating impurities of the air, there is no description about concentrating oxygen.

The Office Action takes the position that the adsorbers of Guillard are inherently capable of adsorbing nitrogen since the adsorbers of Guillard comprise alumina and a molecular sieve capable of adsorbing CO₂. (Office Action, page 4.) For supporting this conclusion the Office Action cited Maki (US 4,113,839).

However, just because the adsorbers of Guillard are capable of adsorbing CO₂ does not necessarily mean that the adsorbers of Guillard are capable of adsorbing nitrogen gas. Furthermore, Maki discloses examples of adsorbents for cleaning air containing low concentrations of NO_x including silica gel, alumina, molecular sieves and active carbon. (Col. 6, lines 65-68.) Maki does not disclose an adsorbent for removing nitrogen gas from the air to concentrate the oxygen in the air. Maki discloses adsorbents for removing low concentrations of nitrogen oxide impurity in the air to remove the nitrogen oxide pollutants from the air. (Col. 1, lines 4-39; col. 6, lines 65-68.) Thus, Maki does not support that the adsorbers in Guillard are inherently capable of removing nitrogen gas from the air to concentrate the oxygen.

Furthermore, Guillard discloses that the material such as alumina of the layer 8A, 8B represents between 60 and 100 % of the adsorption packing. (Col. 3, lines 6-9.) This means that the material such as molecular sieve of the layer 9A, 9B represents between 40 and 0 %. Since the adsorber is configured with a larger proportion of an alumina layer, it is clear that the

Amendment under 37 C.F.R. §1.116
Attorney Docket No. 053168
Application No. 10/550,627

adsorber is configured to absorb moisture and impurities. An adsorber for adsorbing nitrogen gas would have a much higher proportion of a molecular sieve capable of adsorbing nitrogen gas.

For at least the foregoing reasons, claims 1, 3, 5 and 7 are patentable over the cited references. Accordingly, withdrawal of the rejection of claims 1, 3, 5 and 7 is hereby solicited.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,
WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP

/Andrew G. Melick/

Andrew G. Melick
Attorney for Applicants
Registration No. 56,868
Telephone: (202) 822-1100
Facsimile: (202) 822-1111

AGM/adp